

5

10

**PROFILE RESPONSIVE
ELECTRONIC MESSAGE MANAGEMENT
SYSTEM**

Peter H. Pedersen, Inventor

15

The present application claims the benefit of prior filed U.S. Provisional Patent Application serial number 60/217,719, filed 12 July 2000, to which the present application is a regular U.S. National Application.

20

Field of the Invention

25

The present invention is in the field of electronic computers and digital processing systems for filtered and targeted electronic message distribution. More specifically, the present invention relates to a system and method for the central filtering and distribution processing of messages from multiple messengers to selected individual recipients under filtering and distribution parameters in part established by each intended recipient.

Background of the Invention

This invention relates generally to the field of messaging and more particularly to a process and method for central specification and management of how messages are distributed to recipients. The need for receiving messages in different media and through different devices is exploding. Physical (hardcopy) letters and faxes, and phone message means have been supplemented with e-mail, SMS messages, WAP, voice messages, Extranet updates and more means to come.

Presently for organizations to keep customers and clients updated with the kind of information and messages that will assure goodwill and loyal behavior is a complex task requiring resources, focus and complex information technology (IT) solutions. Many organizations already have rule based Customer Relation Management IT systems. These systems are designed to handle message profiles based on rules for how each individual customer/client will receive information and messages.

Since customer information can be mission critical, Customer Relation Management (CRM) systems are most often for security reasons maintained by the customer service department inside the organization. Defining and changing message profile requires an interaction between each individual customer and the customer service department, to prevent unauthorized access to the CRM system by individuals. These message profiles must be entered and maintained in every single CRM system - in every single organization - for every single customer/client. The customers/clients will find it both time consuming and difficult to contact all his information suppliers to make them update his profile with e.g. a new e-mail address or phone number.

Due to the complexity, time consuming and resource demanding task in defining, operating and maintaining messages profiles on a one-to-one basis, only a few organizations today are able to keep customers/clients informed with respect to how, when and where the individual customer prefer to receive his message information. The inaccessibility of efficient message management means results in widespread use of inefficient mass communication means, such as spam e-mail, and household delivered promotion materials ("junk mail"). The massive use of Direct Mailings without relevance annoys the receiver by filling up his mailbox and ignoring his/her real interests. Additionally, the distribution to a potential customer of relevant information - but at the wrong time or in the wrong place may disappoint or frustrate a receiver who missed or was not able to use the information. These considerations may even dissuade companies from distributing any information at all, because it is too complex, costly and time consuming. This can leave customers motivated to exploit alternative companies, lowering customer loyalty, and lowering overall business effectiveness dramatically.

Particularly regarding electronic messaging, the field has recognized some of the existing disadvantages and has been motivated to address them. For example, Miloslavsky, U.S. Patent No. 5,765,033, discloses a rule based electronic mail system for receiving messages, extracting information from the message, and then forwarding the extracted information to a particular recipient based on the content of a set of rules. However, the recipient of the information and the sender of the message do not have direct access to the rule set and the ability to redefine the sets parameters. Finney *et al.*, U.S. Patent No. 6,182,118, also disclose a rule based system for managing electronic messages. In the Finney system, a recipient can access the rule set and define in advance certain parameters controlling whether a message received by the system is forwarded to the recipient. However, the system of Finney does not provide for a sender of a message being able to define any parameters of the rules controlling the

forwarding of its messages to a designated recipient or group of recipients.

Therefore, it would be beneficial to have an electronic message management system where each individual recipient could access a rule set and maintain the parameters of his/her own message profile, thus, enabling each recipient to designate specific or classes of messenger from whom they are willing to receive a message, and to specify how the information or messages are to be delivered. Additionally, it would be useful for messengers to be able to submit not only message content, but also individual and group recipient profiles or identifications to the central message management system rule set, to enable message distribution and delivery to recipients according to individual recipient profiles. It would be further useful to have an electronic messaging system wherein individual recipients centrally can define a plurality of recipient profiles specifying how messages from messengers generally or from certain messengers specifically must be distributed to him/her.

Summary of the Invention

The present invention is an electronic message management system and method for the central specification and management of how messages electronic
5 messages received from a plurality of messengers or sources are distributed to individual recipients. The present message management system comprises an electronic computer system in operative communication with a global digital communications network, and a message management database in operative communication with the computer system. The computer system of the present
10 message management system includes: a recipient profile application for receiving recipient profile data from recipients via the global network and storing the recipient data in the database; a messenger profile application for receiving messenger profile data from messengers via the global network and storing the messenger data in the database; a message input application for receiving message
15 files from a messenger via the global network and storing the message files in the database; and an individual message generator in communication with the database and operative to access and utilize data and files from the database to generate an individual message to be sent via the global communications network to a recipient specified by a messenger. A recipient is an individual or related
20 group of individuals to whom a message is directed or sent. A messenger or messengers are the initiators of messages sent to the recipients.

The computer system of the present message management system further comprises a message management server operating system, and the message
25 management database further comprises recipient and messenger profile databases for storing recipient and messenger profile data respectively, and a message database for storing message data files. The recipient profile application includes a global network interactive recipient profile input form. The recipient profile

input form is accessible to a recipient computer via a global communications network. The recipient profile application also includes a network interface and a recipient profile editor for receiving recipient profile data from a recipient computer via the global network interface, and for manipulating the recipient profile database to store the recipient profile data. The recipient profile application receives and stores a plurality of messenger specific profiles, each profile indicating delivery parameters for where, when and how specific types of messages from each messenger are to be delivered to the recipient.

The messenger profile application includes a global network interactive messenger profile input form, which is accessible to a messenger computer via the global communications network. The messenger profile application also includes a global network interface and a messenger profile editor for receiving messenger profile data from a messenger computer via the global network interface, and for manipulating the messenger profile database to store the messenger profile data. Messenger profile data can include: messenger identifying data, recipient identifications and recipient profiles, which messages to deliver to the recipients, and the profiles stored. The messenger profile application further includes receiving and storing recipient identification and recipient profiles for recipients who are to be prevented from receiving a message from the messenger.

The message input application includes an interactive global network message input form, the message input form being accessible to a messenger computer via the global communications network. The message input application further comprises a global network interface and a message data file editor for receiving a message file data from a messenger computer via the global network interface and for manipulating the message database to store the message data file.

The individual message generator of the message management system communicates with the databases to identify messages and messenger parameters

that are compatible with a recipient profile and to generate individualized messages configured for delivery to the appropriate recipient. Once the individual message is generated, the message generator sends the individual message to the recipient via a means selected from the group consisting of: electronic mail, voice
5 telephone, facsimile transmission, and digital transmission, or other means as specified by the recipient in the recipient's profile parameters.

In practice, the present the message management system is accessible from a client computer via a global communications network, to centrally manage
10 the distribution and delivery format of messages from multiple messenger sources to multiple individual recipients. This is accomplished by providing client computers with access to the message management system via a global communications network, where the client computers are messenger and recipient computers. The message management system receives a connectivity request from
15 a client computer for access to the message management system to input data. The message management system connects to the client computer via the global communication network, and prompts the client computer for the data to be inputted by providing a data input form to the client computer. The message management system accepts input data from the client computer via the input
20 form, and enters the input data into a message management database of the message management system. Input forms practicable in the present message management system include: a recipient profile form, a messenger profile form, and a message input form. Other input forms or display forms may also be displayed by the message management system on a client computer system.

25 Accepting input data includes entering the input data into an electronic message management database, such as a recipient profile database, a messenger profile database, or a message database.

Brief Description of the Drawings

Figure 1 is a block diagram for one embodiment of an operating environment for practicing the present invention.

5

Figure 2 is a block diagram for one embodiment of a message management server suitable for use in the operating environment of Figure 1.

10

Figure 3a is a block diagram of one embodiment of a message management user computer system.

Figure 3b is a block diagram of one embodiment of a message management messenger computer system.

15

Figure 4 shows an principal overall flow diagram of a message management server system 1000 - a exemplary embodiment of the present invention. The figure is illustrating the relationship between the various levels of the subsystems.

20

Figure 5 shows the process related to Recipient Profile system 100 in Figure 4 for creating and maintaining a recipient message profile and message delivery profiles for one or more messengers.

25

Figure 6 shows the process related to messenger profile system 200 in Figure 4 for creating a messengers message profile for the available message types and content type the messenger will offer and recipient message profiles for recipients who must receive specific message types and content types.

Figure 7 shows the process related to message input system 300 in Figure 4 for how the messenger can enter messages or upload message files manually or automated, to be distributed to the recipients.

- 5 Figure 8 shows the process related to individual message generator system 400 in Figure 4 for how the message uploaded or entered is combined with the message delivery profiles and how a output file with individual messages is generated and submitted for distribution.

10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95
100
105
110
115
120
125
130
135
140
145
150
155
160
165
170
175
180
185
190
195
200
205
210
215
220
225
230
235
240
245
250
255
260
265
270
275
280
285
290
295
300
305
310
315
320
325
330
335
340
345
350
355
360
365
370
375
380
385
390
395
400
405
410
415
420
425
430
435
440
445
450
455
460
465
470
475
480
485
490
495
500
505
510
515
520
525
530
535
540
545
550
555
560
565
570
575
580
585
590
595
600
605
610
615
620
625
630
635
640
645
650
655
660
665
670
675
680
685
690
695
700
705
710
715
720
725
730
735
740
745
750
755
760
765
770
775
780
785
790
795
800
805
810
815
820
825
830
835
840
845
850
855
860
865
870
875
880
885
890
895
900
905
910
915
920
925
930
935
940
945
950
955
960
965
970
975
980
985
990
995

Detailed Description of the Invention

Referring now to the drawings, the details of preferred embodiments of the present invention are graphically and schematically illustrated. Like elements in the drawings are represented by like numbers, and any similar elements are represented by like numbers with a different lower case letter suffix. It is to be understood, however, that the present invention may be embodied in various forms. Therefore, specific details disclosed herein are not to be interpreted as limiting, but rather as a basis for the claims and as a representative basis for teaching one skilled in the art to practice the present invention.

Figure 1 is a block diagram exemplifying one embodiment of the present invention in a suitable operating environment. The following description of Figure 1 provides an overview of computer hardware and other operating components suitable for implementing the present invention, but it is to be appreciated that the present invention is not limited to the configuration shown in Figure 1. Figure 1 shows several computer systems 20, 22, 40-43 coupled together through a network 11, such as a LAN, WAN or a global digital communications network, such as the World Wide Web or the Internet. The term "Internet" as used herein refers to a network of networks, which uses certain protocols, such as the TCP/IP protocol, and possibly other protocol such as the hypertext transfer protocol (HTTP) for a hypertext markup language (HTML) documents that make up the World Wide Web. The physical connectivity scheme of the Internet and the communication protocols and procedures of the Internet are well known in the art.

A client computer system 20, 22, and 40-43 typically obtains access to the Internet 11 through an Internet Service Provider (ISP) 12 & 13. Access to the

Internet 11 allows a user of a client computer systems 20, 22, and 40-43 to exchange information, receive and send e-mails and view documents such as documents prepared in the HTML format. These documents are provided by web servers 14, which is considered to be "on" the Internet 11. Often these web servers 14 are provided by ISPs. However, setting up a computer system to be directly connected to the Internet 11, and serve as it own ISP is well-known in the art. A web server 14 is typically at least one computer system, which operates as a server computer system and is configured to operate with the protocols of the World Wide Web, and is coupled with the Internet 11. Optionally, web server 14 can be part of an ISP 12 & 13 which provides access to the Internet 11 for client systems. Figure 1 shows a web server 14 coupled to a server computer system 15 which itself is coupled to web content 16, which is a form of a media database. It is to be appreciated that while two computer systems 14 and 15 are shown in Figure 1, web server 14 and server computer system 15 can be one computer system having different software components, one providing web server 14 functionality and another providing server 15 functionality.

With the appropriate web browsing software, a client computer systems 20, 22 and 40-43 can view HTML pages provided by web server 14 via the Internet 11. In one embodiment of the present invention, the web server 14 comprises a message management server. As shown in Figure 1, an ISP 12 provides Internet connectivity to a client computer system 20 through a modem or network interface 21, which can be considered part of client computer system 20. Client computer system 20 can be a personal computer system, a personal digital assistant, a network computer, a Web TV system, an Internet radio receiver, or other such computer systems.

Similarly, an ISP 13 provides Internet connectivity for other client computer systems 22 & 40-43, although, as shown in Figure 1, the connections are not the same for all of these computer systems. Client computer system 22 is

coupled through a network interface 23, which may be a modem, while two computer systems 40 and 41 are part of one LAN 33 and two other computer systems 42 and 43 are part of another LAN 34.

5 It is to be appreciated that a network interface can be practiced using any of a number of devices known to the ordinary skilled artisan, such as an analog modem, a ISDN modem, a cable modem, a satellite transmission interface (e.g., “Direct PC”), or another interface for coupling one computer system to other computer systems. Client computer systems 40-43 are coupled to LAN buses 33 and 34 through network interfaces 35-38, which can be Ethernet network or other network interfaces. The LAN buses 33, 34 are also coupled to gateway computer systems 31, 32, which can provide firewall and other Internet related services for the LANs 33, 34.

10 The gateway computer systems 31, 32, are coupled to the ISP 13 to provide Internet connectivity to the respective client computer systems 40- 43. The gateway computer systems 31, 32 may be conventional server computer systems. Also, web server 14 may be a conventional server computer system.

15 Figure 2 is a block diagram illustrating the components of an embodiment of the message management server 50 the present invention, and their interrelationships. In the embodiment illustrated, the message management server 50 is at least in part comprised of the server computer system 15 and database 16 of Figure 1. The message management server 50 includes a profile database 56 for centrally storing profile and other information received from messengers and recipients, and from other users, such as system administrators. The message management server 50 includes a message database 57 for centrally storing messages received from messenger client computer systems 40, 41, 42 & 43. A computer system used to enter recipient profile data into the message management

20

25

server 50 is a recipient computer system 20 & 22.

The message management server 50 comprises a recipient profile software application which includes a recipient profile input form 51. The recipient profile input form 51 include discrete information fields, as will be discussed below, and may be displayed at a recipient's client computer 20 & 22 as a web page, as described above. The recipient profile input form 51 receives information input through the recipient computer systems 20 & 22, and the associated application processes the information into records to be stored in profile database 56.

The message server 50 also comprises a messenger profile software application, which includes a messenger profile input form 52. The messenger profile input form include discrete information fields, as will be discussed below, and may be displayed at a messenger's client computer 40, 41, 42 & 43 in the form of a web page, as described above. The messenger profile input form 52 receives information input through the messenger computer systems 40 - 43, and the associated application processes the information into records to be stored in profile database 56.

The message server 50 further comprises a message input software application, which includes a message input form 53. The message input form 53 include discrete information fields, as will be discussed below, and may display at a messenger's client computer 40, 41, 42 & 43 in the form of a web page, as described above. The message input form 52 receives information input through the messenger computer systems 40 - 43, and the associated software application processes the information into records to be stored in the message database 57.

The individual message generator 54 obtains information from the database 57 and generates an individual messages for each recipient, based on the combination of recipient and messenger profile parameters and messages entered into the profile 56 and message 57 databases.

It is also to be appreciated that message management server 50 and its component applications are controlled by the operating system software 55 which includes a file management and disk operating system. Example of operating systems with associated file management software includes the Microsoft® Corporation (Redmond, Washington,) series of Windows® operating systems, including Windows Explorer®. The file management system is typically stored in mass memory and causes a processor to execute the various operations required by the operating system to input and output data and to store data in memory, including storing files on mass memory, as will be described below.

Figure 3a is a block diagram exemplifying one embodiment of a client computer system 20 & 22, wherein the user is a recipient. Recipients are users that are the targeted receivers of messages generated and sent via the individual message generator 54. A recipient computer system 60 includes a web browser 61 for accessing the web server 14 and message management server 15 via a connection 63 to the Internet 11. The recipient 60 also includes an operating system 62, to run other programs on the recipient computer system 22. The connection arrow 63 of Figure 3a illustrates the connection of the recipient computer system 60 to an ISP 12 & 13 for interacting with other computer systems via the Internet 11. It is understood that any or all of the modules 61 & 62 of the recipient computer system 60 may be included in hardware or software, on one system or on many systems.

Figure 3b is a block diagram exemplifying an embodiment of a client computer system 40, 41, 42 & 43, wherein the user is a messenger. The messenger computer system 70 includes a web browser 71 and an operating system 72. The web browser 71 is used to interact via a network, like the Internet 11, with the web server 14 and the message management server 15. The operating system 72 runs

programs on the messenger computer system 70. The connection arrow 73 illustrates the direct or indirect connection of the messenger computer system 70 to an ISP 13 for interacting with other computer systems via the Internet 11. It is understood that any or all of the modules 71 and 72 of messenger computer system 70 may be included in hardware or software, on one system or on many systems.

Figure 4 is a block diagram illustrating the overall principle of an exemplary embodiment of the present message management server 1000. The figure illustrates the relationship between the various subsystems 100, 200, 300 and 400 of the message management server 1000.

The recipient profile system 100 is for entering, managing and storing rules about how the message management system server 1000 is to communicate with each individual recipient. From a recipient computer system 60, as described in Figure 3a, a recipient will access the message server 1000 through recipient profile editor/web interface 150. The web interface feature of the profile editor/web interface 150 could be a Web site (HTML document) accessed by the recipient via a web browser or similar application.

A recipient will log on to the message management system server 1000 and enter his/her basic identification data. The identification data will be stored in the recipient ID and profile database 121, a sub system of the profile database 56 of Figure 2. In addition, the recipient will enter one or more sets of message profile data, specifying one or more messengers, type of messages and type of content the recipient wishes to receive from each messenger. These data will be stored in the recipient message profile database 122, a sub system of the profile database 56 in Figure 2. For each message profile entered, the recipient will specify one or more message delivery profiles with data about how messages must be

distributed, where to receive the specified message and the type of message devices to transmit the messages. These data are stored in the message delivery profile database 123, a subsystem of the profile database 56 in Figure 2.

5 The messengers profile system 200 allows a messenger to access the message management system server 1000 to enter and maintain his/her own basic identification information and messenger profile data from a messenger computer system 70, as described in Figure 3b. The messenger computer 70 accesses the message management server 1000 via the messenger profile editor/ web interface
10 250, using an Internet enabled application, such as a web browser. The messenger will log on to the message system server 1000 and enter his identification data. These data are stored in the messengers ID and profile database 221, a subsystem of the profile database 56 of Figure 2.

15 Additionally, a messenger utilizes the messenger profile editor/ web interface 250 to enter one or more sets of messenger profile data, specifying the types of messages and types of content the messenger is providing to recipients in general. This profile is stored the messengers message profile database 222, a subsystem of the profile database 56 of Figure 2. Also, a messenger can specify a list of specific recipient ID's, each combined with a set of message types and
20 content types that the identified must receive. The messengers message profiles entered by the messenger is stored in the recipient message profile database 122, a subsystem of the profile database 56 of Figure 2.

25 The message input system 300 is used by messengers with a valid messenger profile to enter messages for the purpose of having them distributed to recipients according to their individual specified recipient message profiles. From a messenger computer system 70, a messenger logs onto the message management system server 1000. The messenger computer 70 accesses the message

management server 1000 via the message input (upload) editor/web interface 350, using an Internet enabled application, such as a web browser. Once connected, the messenger can manually or automatically enter the message data or upload messages files for distribution to recipients with an appropriate message profile.

5 The message data will be stored in the message database 320, a subsystem of the message database 57 of Figure 2.

The message processor 410 of the individual message generator 400 combines the data from the recipient message delivery profile database 123 with appropriate data from the message database 320. From this combination of data, the message output filer 420 will generate individual messages for each Recipient as specified in the message database 57 and recipient message delivery profile database 123. The generated messages are stored in the message output database 415 until they are further distributed. At the appropriate time, the message generator 400 will forward the generated messages to a message distribution server (not a part of this invention) from where the messages will be converted to the right device protocols and distributed to the devices and addresses as specified by the intended recipient.

Figure 5 is block flow diagram of an exemplary process related to using the recipient profile system 100 of Figure 4 to create and maintain recipient message profiles for a multiple set of messengers. To create or maintain (e.g., update or modify) a recipient message profile, the recipient will logon to the message management system server 1000 using the logon step or procedure 101 to access the recipient profile editor 150. The recipient editor 150 will perform a check 102 to establish whether the recipient has a profile. If not, the recipient is prompted 103 to provide basic identity and profile information. Then the recipient editor 150 creates 104 a recipient identity profile and store this in the recipient ID and profile

database 121.

Based on the existence of recipient identity profile data, procedure 105 will now perform a lookup in the messenger ID and message profile database 221, and retrieve all messengers with a basic profile matching the recipient's basic profile parameters: e.g., country, city, gender, etc. A list of available messengers is presented to the recipient, and the recipient selects a messenger. In step 106, the recipient specifies the message types and content types to be received from the selected messenger. In step 107, the recipient specifies one or more preferred delivery profiles: e.g., the message device, the delivery address, the delivery schedule, sequence of appearance, etc. for each message and content type specified in step 106.

In step 108, the recipient editor application 150 checks for additional delivery profiles. Step 107 is repeated until the recipient has specified all necessary delivery profiles and parameters for the chosen message and content type. In step 109, the recipient editor 150 checks for additional message and content types. Step 106 is repeated until the recipient has specified all necessary message and content types for the chosen messenger. In step 110, the recipient editor application 150 checks for additional messengers. Step 105 is repeated until the recipient has specified all the messengers for whom he/she wants to specify a message profile. In step 111, the recipient editor application creates a recipient message profile for the recipient logged onto the system and stores the profile data in the recipient message profile database 122. Step 111 also creates a recipient message delivery profile for the recipient logged onto the system and stores this data in the recipient message delivery profile database 123.

Figure 6 is block flow diagram of an exemplary process related to using the messenger profile input system 200 of Figure 4 to create and maintain messengers message profiles for the available message types and content type the messenger

wishes to offer, and to create and maintain a messenger's recipient message profile for recipients targeted to receive specific message types and content types. To create or maintain a messengers message profiles and/or a messenger's recipient message profiles, the messenger logs onto the message management system server 100 using the logon step or procedure 201 to access the messenger profile editor 250. The messenger profile editor 250 will perform a check 202 to establish whether the messenger has a profile. If not, the messenger is prompted 203 to provide basic identity and profile information. Then the messenger editor 250 creates 204 a messenger identity profile and stores this in the messenger ID and profile database 221.

The messenger editor 250 now asks 205 if the messenger will create or update a messenger message profile or a messenger's recipient message profile. If in step 205, the messenger elects to create or update a messengers message profile, the messenger editor 250 displays 206 an input screen from which the messenger can specify multiple sets of message types and content types to be offered to recipients. In step 207, the messenger editor 250 then creates a messengers message profile for the messenger logged on and store this in the messengers message profile database.

Alternatively, if in step 205, the messenger elects to create or update a messengers recipient message profile, the messengers editor 250 displays 216 an input screen from which the messenger can specify a list of recipient IDs together with multiple sets of message types and content types that each specified recipient is to receive. Then in step 217, the messengers editor 250 creates a recipient message profile for the specified recipient and messenger logged on to the server 1000 and store this in the recipient message profile database 122.

Then in step 208, the messengers editor 250 requests if additional profiles are to be created, and if the messenger elects "yes," step 205 is repeated. If the messenger elects "no," then the procedure is done.

Figure 7 is block flow diagram of an exemplary process related to using the message input system 300 of Figure 4 to manually or automatically input and/or upload messages from a messenger into the present message management system server 1000. To input or upload a message for distribution, the messenger logs
5 onto the message management server 1000 using the logon step 301 to access the message input editor. The message input editor application 350 performs a check 302 to establish if messenger has a valid profile and account for distributing messages. If not, the messenger is shown information 302a for how to open an account, directed elsewhere or exited from the server 1000. If the messenger has
10 a valid profile and account, the message input editor 350 displays 303 a message input form 53, and allows the messenger to elect 304 to enter a message manually or by up loading a message file.

If uploading 315 a message file is elected, the messenger attaches the file to the input form 53, and submits the file to the message management system server 1000. The message input editor 350 validates 316 that the submitted file
15 is correctly formatted, and has valid message type, content type, recipient IDs, message content etc., according to messengers message profile stored in the messengers message profile database 222. If message file is not valid, an error message is returned 316a to the messenger logged on. If message file is valid, the
20 message input editor 350 submits 316 the message to the individual message generator 400 and to the message database 320.

If manually entering 305 the message information is elected, the input form 53 prompts the messenger to enter specifications of message type and content
25 type. The message input editor 350 then looks for match 306 between the messenger, message type, content type and the recipient message profiles in the recipient message profile database 122, and a list of matching recipient IDs is presented to the messenger. The message input editor 350 receives 307 any

amendments (additions, deletions, modification) to the recipient ID list, and finally confirm the Recipient ID's list. In step 308, the message input editor 350 allows the messenger to enter the actual message content through an Internet enabled message component of the message input form 53. After a message has been entered and confirmed, the message input editor 350 submits 317 the message and the confirmed recipient ID list to the individual message generator 400 and to message database 320.

Then the input editor 350 confirms 318 for messenger logged on that the message has been submitted for message generation.

Figure 8 is a block flow diagram of an exemplary process for utilizing the individual message generator 400 of the message management system server 1000. According to the process, the individual message processor 410 receives 401 a message notification from message input system 300. On receipt of the notification, the processor 410 looks up 402 the message in the message database 320, and also looks up the recipient message profiles and delivery profiles in the recipient message profile database 122 and the recipient message delivery profile database 123. Further in this step, the individual message processor 410 matches the recipient, and type and content criteria for the message. In the next step 403, the message output filer 420 of the individual message generator 400 combines the message with the delivery profile data for all recipients matching the profile, and creates a total output file. The message output filer 420 then submits 404 the message output file to a message distributions server (not a part of this invention) and to the message output database 415 for storage.

While the above description contains many specifics, these should not be construed as limitations on the scope of the invention, but rather as exemplifications of one or another preferred embodiment thereof. Many other variations are possible, which would be obvious to one skilled in the art.

5 Accordingly, the scope of the invention should be determined by the scope of the appended claims and their equivalents, and not just by the embodiments.

10 WHAT IS CLAIMED IS:

11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245
246
247
248
249
250
251
252
253
254
255
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294
295
296
297
298
299
300
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343
344
345
346
347
348
349
350
351
352
353
354
355
356
357
358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
382
383
384
385
386
387
388
389
390
391
392
393
394
395
396
397
398
399
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439
440
441
442
443
444
445
446
447
448
449
450
451
452
453
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
479
480
481
482
483
484
485
486
487
488
489
490
491
492
493
494
495
496
497
498
499
500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
518
519
520
521
522
523
524
525
526
527
528
529
530
531
532
533
534
535
536
537
538
539
540
541
542
543
544
545
546
547
548
549
550
551
552
553
554
555
556
557
558
559
560
561
562
563
564
565
566
567
568
569
570
571
572
573
574
575
576
577
578
579
580
581
582
583
584
585
586
587
588
589
590
591
592
593
594
595
596
597
598
599
600
601
602
603
604
605
606
607
608
609
610
611
612
613
614
615
616
617
618
619
620
621
622
623
624
625
626
627
628
629
630
631
632
633
634
635
636
637
638
639
640
641
642
643
644
645
646
647
648
649
650
651
652
653
654
655
656
657
658
659
660
661
662
663
664
665
666
667
668
669
670
671
672
673
674
675
676
677
678
679
680
681
682
683
684
685
686
687
688
689
690
691
692
693
694
695
696
697
698
699
700
701
702
703
704
705
706
707
708
709
710
711
712
713
714
715
716
717
718
719
720
721
722
723
724
725
726
727
728
729
730
731
732
733
734
735
736
737
738
739
740
741
742
743
744
745
746
747
748
749
750
751
752
753
754
755
756
757
758
759
760
761
762
763
764
765
766
767
768
769
770
771
772
773
774
775
776
777
778
779
780
781
782
783
784
785
786
787
788
789
790
791
792
793
794
795
796
797
798
799
800
801
802
803
804
805
806
807
808
809
810
811
812
813
814
815
816
817
818
819
820
821
822
823
824
825
826
827
828
829
830
831
832
833
834
835
836
837
838
839
840
841
842
843
844
845
846
847
848
849
850
851
852
853
854
855
856
857
858
859
860
861
862
863
864
865
866
867
868
869
870
871
872
873
874
875
876
877
878
879
880
881
882
883
884
885
886
887
888
889
890
891
892
893
894
895
896
897
898
899
900
901
902
903
904
905
906
907
908
909
910
911
912
913
914
915
916
917
918
919
920
921
922
923
924
925
926
927
928
929
930
931
932
933
934
935
936
937
938
939
940
941
942
943
944
945
946
947
948
949
950
951
952
953
954
955
956
957
958
959
960
961
962
963
964
965
966
967
968
969
970
971
972
973
974
975
976
977
978
979
980
981
982
983
984
985
986
987
988
989
990
991
992
993
994
995
996
997
998
999
1000
1001
1002
1003
1004
1005
1006
1007
1008
1009
1010
1011
1012
1013
1014
1015
1016
1017
1018
1019
1020
1021
1022
1023
1024
1025
1026
1027
1028
1029
1030
1031
1032
1033
1034
1035
1036
1037
1038
1039
1040
1041
1042
1043
1044
1045
1046
1047
1048
1049
1050
1051
1052
1053
1054
1055
1056
1057
1058
1059
1060
1061
1062
1063
1064
1065
1066
1067
1068
1069
1070
1071
1072
1073
1074
1075
1076
1077
1078
1079
1080
1081
1082
1083
1084
1085
1086
1087
1088
1089
1090
1091
1092
1093
1094
1095
1096
1097
1098
1099
1100
1101
1102
1103
1104
1105
1106
1107
1108
1109
1110
1111
1112
1113
1114
1115
1116
1117
1118
1119
1120
1121
1122
1123
1124
1125
1126
1127
1128
1129
1130
1131
1132
1133
1134
1135
1136
1137
1138
1139
1140
1141
1142
1143
1144
1145
1146
1147
1148
1149
1150
1151
1152
1153
1154
1155
1156
1157
1158
1159
1160
1161
1162
1163
1164
1165
1166
1167
1168
1169
1170
1171
1172
1173
1174
1175
1176
1177
1178
1179
1180
1181
1182
1183
1184
1185
1186
1187
1188
1189
1190
1191
1192
1193
1194
1195
1196
1197
1198
1199
1200
1201
1202
1203
1204
1205
1206
1207
1208
1209
1210
1211
1212
1213
1214
1215
1216
1217
1218
1219
1220
1221
1222
1223
1224
1225
1226
1227
1228
1229
1230
1231
1232
1233
1234
1235
1236
1237
1238
1239
1240
1241
1242
1243
1244
1245
1246
1247
1248
1249
1250
1251
1252
1253
1254
1255
1256
1257
1258
1259
1260
1261
1262
1263
1264
1265
1266
1267
1268
1269
1270
1271
1272
1273
1274
1275
1276
1277
1278
1279
1280
1281
1282
1283
1284
1285
1286
1287
1288
1289
1290
1291
1292
1293
1294
1295
1296
1297
1298
1299
1300
1301
1302
1303
1304
1305
1306
1307
1308
1309
1310
1311
1312
1313
1314
1315
1316
1317
1318
1319
1320
1321
1322
1323
1324
1325
1326
1327
1328
1329
1330
1331
1332
1333
1334
1335
1336
1337
1338
1339
1340
1341
1342
1343
1344
1345
1346
1347
1348
1349
1350
1351
1352
1353
1354
1355
1356
1357
1358
1359
1360
1361
1362
1363
1364
1365
1366
1367
1368
1369
1370
1371
1372
1373
1374
1375
1376
1377
1378
1379
1380
1381
1382
1383
1384
1385
1386
1387
1388
1389
1390
1391
1392
1393
1394
1395
1396
1397
1398
1399
1400
1401
1402
1403
1404
1405
1406
1407
1408
1409
1410
1411
1412
1413
1414
1415
1416
1417
1418
1419
1420
1421
1422
1423
1424
1425
1426
1427
1428
1429
1430
1431
1432
1433
1434
1435
1436
1437
1438
1439
1440
1441
1442
1443
1444
1445
1446
1447
1448
1449
1450
1451
1452
1453
1454
1455
1456
1457
1458
1459
1460
1461
1462
1463
1464
1465
1466
1467
1468
1469
1470
1471
1472
1473
1474
1475
1476
1477
1478
1479
1480
1481
1482
1483
1484
1485
1486
1487
1488
1489
1490
1491
1492
1493
1494
1495
1496
1497
1498
1499
1500
1501
1502
1503
1504
1505
1506
1507
1508
1509
1510
1511
1512
1513
1514
1515
1516
1517
1518
1519
1520
1521
1522
1523
1524
1525
1526
1527
1528
1529
1530
1531
1532
1533
1534
1535
1536
1537
1538
1539
1540
1541
1542
1543
1544
1545
1546
1547
1548
1549
1550
1551
1552
1553
1554
1555
1556
1557
1558
1559
1560
1561
1562
1563
1564
1565
1566
1567
1568
1569
1570
1571
1572
1573
1574
1575
1576
1577
1578
1579
1580
1581
1582
1583
1584
1585
1586
1587
1588
1589
1590
1591
1592
1593
1594
1595
1596
1597
1598
1599
1600
1601
1602
1603
1604
1605
1606
1607
1608
1609
1610
1611
1612
1613
1614
1615
1616
1617
1618
1619
1620
1621
1622
1623
1624
1625
1626
1627
1628
1629
1630
1631
1632
1633
1634
1635
1636
1637
1638
1639
1640
1641
1642
1643
1644
1645
1646
1647
1648
1649
1650
1651
1652
1653
1654
1655
1656
1657
1658
1659
1660
1661
1662
1663
1664
1665
1666
1667
1668
1669
1670
1671
1672
1673
1674
1675
1676
1677
1678
1679
1680
1681
1682
1683
1684
1685
1686
1687
1688
1689
1690
1691
1692
1693
1694
1695
1696
1697
1698
1699
1700
1701
1702
1703
1704
1705
1706
1707
1708
1709
1710
1711
1712
1713
1714
1715
1716
1717
1718
1719
1720
1721
1722
1723
1724
1725
1726
1727
1728
1729
1730
1731
1732
1733
1734
1735
1736
1737
1738
1739
1740
1741
1742
1743
1744
1745
1746
1747
1748
1749
1750
1751
1752
1753
1754
1755
1756
1757
1758
1759
1760
1761
1762
1763
1764
1765
1766
1767
1768
1769
1770
1771
1772
1773
1774
1775
1776
1777
1778
1779
1780
1781
1782
1783
1784
1785
1786
1787
1788
1789
1790
1791
1792
1793
1794
1795
1796
1797
1798
1799
1800
1801
1802
1803
1804
1805
1806
1807
1808
1809
1810
1811
1812
1813
1814
1815
1816
1817
1818
1819
1820
1821
1822
1823
1824
1825
1826
1827
1828
1829
1830
1831
1832
1833
1834
1835
1836
1837
1838
1839
1840
1841
1842
1843
1844
1845
1846
1847
1848
1849
1850
1851
1852
1853
1854
1855
1856
1857
1858
1859
1860
1861
1862
1863
1864
1865
1866
1867
1868
1869
1870
1871
1872
1873
1874
1875
1876
1877
1878
1879
1880
1881
1882
1883
1884
1885
1886
1887
1888
1889
1890
1891
1892
1893
1894
1895
1896
1897
1898
1899
1900
1901
1902
1903
1904
1905
1906
1907
1908
1909
1910
1911
1912
1913
1914
1915
1916
1917
1918
1919
1920
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
1936
1937
1938
1939
1940
1941
1942
1943
1944
1945
1946
1947
1948
1949
1950
1951
1952
1953
1954
1955
1956
1957
1958
1959
1960
1961
1962
1963
1964
1965
1966
1967
1968
1969
1970
1971
1972
1973
1974
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
2051
2052
2053
2054
2055
2056
2057
2058
2059
2060
2061
2062
2063
2064
2065
2066
2067
2068
2069
2070
2071
2072
2073
2074
2075
2076
2077
2078
2079
2080
2081
2082
2083
2084
2085
2086
2087
2088
2089
2090
2091
2092
2093
2094
2095
2096
2097
2098
2099
2100
2101
2102
2103
2104
2105
2106
2107
2108
2109
2110
2111
2112
2113
2114
2115
2116
2117
2118
2119
2120
2121
2122
2123
2124
2125
2126
2127
2128
2129
2130
2131
2132
2133
2134
2135
2136
2137
2138
2139
2140
2141
2142
2143
2144
2145
2146
2147
2148
2149
2150
2151
2152
2153
2154
2155
2156
2157
2158
2159
2160
2161
2162
2163
2164
2165
2166
2167
2168
2169
2170
2171
2172
2173
2174
2175
2176
2177
2178
2179
2180
2181
2182
2183
2184
2185
2186
2187
2188
2189
2190
2191
2192
2193
2194
2195
2196
2197
2198
2199
2200
2201
2202
2203
2204
2205
2206
2207
2208
2209
2210
2211
2212
2213
2214
2215
2216
2217
2218
2219